

## **Energy From a Wind Turbine**

**The Power Produced is Proportional  
to the Cube of the Wind Speed**

**Theoretical Maximum Power Output  
=  $0.297 \rho A V^3$**

**(59% of the total energy can be  
extracted)**

**V = wind speed**

**A = area swept by the blade(s)**

**$\rho$  = density**

**For Average Condition**

$$P/m^2 = 6.1 \times 10^{-4} V^3$$